

A Recipe for Traits

A set of instructions called DNA makes a "recipe" for traits in all organisms. Information in a DNA strand is grouped into small segments. Each segment is made of even smaller units (like recipes are made of words, and words are made of letters.) Differences in the DNA "alphabet" are what make differences in traits (just like a different sequence of letters makes different words, and a different recipe.)

Follow the directions below to create a DNA recipe for a dog. Using the dog Traits Key, read your DNA recipe and make a drawing of your dog showing all of its traits.

Directions

1. Make sure you have an envelope containing "Dog DNA."
2. Determine the first trait of your dog (body shape) by randomly picking a piece of dog DNA out of the envelope.
3. Look at the symbols on the DNA strip you have chosen. Match the pattern to one you see on the Dog Traits Key for Body Shape.
4. Color the symbol strip under the picture the same color of the strip that you pulled out of the envelope.
5. Set the DNA strip aside and repeat steps 1-4 for each of the traits on the Dog Traits Key. Go in order. Start with the sheet that has **Body Shape** first and the do the sheet that has **Eyes** first.
6. When you have finished, draw your dog with all of its traits (the ones you colored on the key) on a separate sheet of white paper. Use color according to the traits you have. Outline your dog in black.
7. Give your dog a name and write it in large, black letters at the top of your paper. Put your name on the bottom left corner of your paper.

8. Give the DNA strips you colored on your traits key in order across the top of your drawing.